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Fragmentation of low-boiling disperse phase in turbulent flow of cooling emulsion

Rosentsvaig A., Strashinskii C.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

A qualitative analysis of a character of joint heat transfer and drop fragmentation of an overheated disperse phase at a movement of a cooling emulsion in a turbulent regime was carried out. We considered a general model of a drop fragmentation into the emulsion volume by turbulent pulsations of the flow in view of the presence of an excess heat energy in it. Conditions when an effect of the overheating the disperse phase exerts a maximum resistant size of a drop relative to the fragmentation were determined. © 2009 Pleiades Publishing, Ltd.

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